

I claim:

1. A shock isolator for simultaneously isolating shocks and supporting a static load comprising:

5           an elastomer material, said elastomer material having a set of connecting walls integrally forming a four-sided shock isolator with a cavity therein, said four-sided shock isolator having a central axis; and

              a first elongated support surface located on a first end of the elastomer material and a second elongated support surface located on an opposing end of the elastomer material

10          with said first elongated support surface and said second elongated support surface being rotationally positioned with respect to each other so that any point on said first support surface is supported by said second support surface and vice versa.

2. The shock isolator of claim 1 wherein the first support surface is identical to the

15          second support surface in shape.

3. The shock isolator of claim 1 wherein the first support surface and the second support surface are of different sizes and shapes.

20          4. The shock isolator of claim 1 wherein said cavity includes a damping material.

5. The shock isolator of claim 1 wherein the first elongated support surface and the second elongated support surface are substantially parallel to each other so that a compressive force acting on said first elongated support surface causes the side to bulge

25          partially outwardly and partially inwardly in response to compressive forces on either of said first elongated support surface or said second elongated support surface.

6. The shock isolator of claim 1 wherein the rotational positioning of the first support surface with respect to the second support surface is 90° about a longitudinal axis.

7. A shock isolator for simultaneously isolating shocks and supporting a static load in 5 an axial offset compression mode comprising:

a four-sided elastomer, said elastomer having a chamber therein;  
a central axis, said elastomer having a first end and a second end;  
a first elongated support surface located at the first end of said four-sided elastomers; and

10 a second elongated support surface located at the second end of said four-sided elastomers, said first elongated support surface laterally positioned with respect to said second elongated support surface so that any point on said first support surface is supported by said second support surface and vice versa to thereby simultaneously provide shock and vibration attenuation while providing axially offset support without allowing a 15 direct compressive path through a longitudinal axis of the material.

8. The shock isolator of claim 7 wherein the first support surface is rotationally positioned at an angle 90° with respect to the second support surface.

20 9. The shock isolator of claim 7 including a first rigid mounting plate secured to the first elongated support surface of said elastomer and a second rigid mounting plate secured to the second elongated support surface of said elastomer.

25 10. The shock isolator of claim 7 wherein the first elongated support surface is the same size as the second elongated support surface.

11. The shock isolator of claim 7 wherein the size of the first elongated support surface is different from the size of the second elongated support surface.

12. The shock isolator of claim 7 wherein the four-sided elastomer consists of four 5 sides none of which are perpendicular to said first elongated support surface.

13. The shock isolator of claim 7 wherein the first elongated support surface and the second elongated support surface are substantially parallel to each other so that a compressive force acting on either the first elongated support surface or the second support 10 surface causes the four-sided elastomer to bulge outwardly and inwardly in response thereto.

14. The shock isolator of claim 7 including a further four-sided elastomer, said further four-sided elastomer stacked in an end-to-end relationship with said four-sided elastomer.

15. The shock isolator of claim 7 wherein the first elongated support surface and the second elongated support surface comprises a first rectangular support surface and a second rectangular support surface.

20 16. A method of making a shock isolator to simultaneously provides compression support and shock isolation comprising:  
molding an elastomer material into a hollow four-sided member;  
forming a first elongated support surface on a first end of the four-sided member;  
and

25 forming a second elongated support surface on a second end of said four-sided member, with said first elongated member and said second elongated member positioned with respect to each other so that any point on said first elongated support surface is

supported by said second elongated support surface and vice versa to thereby provide shock and vibration attenuation and axially offset support.

17. The method of claim 16 including the step of attaching a first rigid mounting plate to  
5 the first elongated support surface and attaching a second rigid mounting plate to the second elongated support surface of said shock isolator.

18. The method of claim 16 including the step of placing a damping material into a cavity of said shock isolator.